

TECHNOLOGY DIVISION

NANOFABRICATION TECHNOLOGY

Explore a frontier unseen by the naked eye



NANO... THIS... NANO ...THAT.

At first, it sounds like a kid's chant, but that's deceiving. Nano systems are the places young people go every day as they use Bipods, M3 players, laptops and cell phones capable of taking pictures, sending text messages and dialing up the Internet.

This is where the action is, and HACC is part of that action.

Enter the advanced world of the tiny that HACC offers through its Nanofabrication Technology program.

This is where the nanometer – defined as a 0.000000001 of a meter – reigns. Challenges in learning about nanotechnology are complex because they center on manipulating atoms.

The prospects for expanding the economy are so exciting that private industry, educational institutions and government agencies are collaborating to discover uses that ultimately could help to solve worldwide problems such as hunger and global warming.

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HACC provides high-quality education at the lowest cost in the area. Find admissions information, tuition and fees and a list of the 22 south-central Pennsylvania school sponsoring districts that pick up part of the tuition cost for residents at www.hacc.edu.

HACC students receive more than \$65 million in financial aid annually. To fill out a free application for Federal Student Aid go to: www.fafsa.ed.gov. For more financial information, call HACC Financial Aid Services at (717) 780-2330.

For more information about Nanotechnology, contact Instructor, William (Bill) Forney at (717) 221-1300 X 1402 or email wcforney@hacc.edu.



HACC does not discriminate in employment, student admissions, and student services on the basis of race, color, religion, age, political affiliation or belief, sex, national origin, ancestry, disability, place of birth, General Education Development Certification (GED), marital status, sexual orientation, gender identity or expression, veteran status, or any other legally protected classification.

CORNERING THE MARKET

HACC collaborates with Penn State University and state government in the Pennsylvania Nanofabrication Manufacturing Technology (NMT) Partnership through which students undertake an intensive course of study to earn an Associate in Applied Science degree as they learn to be clean room technicians who assist in producing new products.

INTO THE FUTURE

The National Science Foundation believes nanotechnology will expand from a current 20,000 jobs to two million jobs in a decade.

Graduates are being recruited by such companies as Intel, Seagate, Merck and Air Products. More than 50 Pennsylvania companies are involved with the technology. Starting pay runs from \$37,500 up to \$50,000 a year with signing bonuses of \$5,000.

THE CURRICULUM

The HACC program prepares students to assist with research through observation, reports and troubleshooting manufacturing process problems.

An Associate in Applied Science degree requires 71 credits including:

- 37 credits highlighting computer-aided drafting and design, fundamentals of electronics, nanofabrication procedures, lithography and materials modification;
- 15 credits of chemistry, physical science, algebra, trigonometry and statistics, and
- 19 credits in English composition, technical writing, interpersonal communication and electives.

A unique facet is the chance to attend the Penn State Electronic Materials and Processing Research Laboratory in State College during the final semester. A student must achieve a 3.0 grade average and the recommendation of the HACC program coordinator for this capstone semester.

If successful in applying:

- The student receives free room and board in State College, and
- The state pays the semester's difference in HACC and Penn State tuitions.
- Upon graduating from HACC, Penn State also issues a certificate of completion.
- All credits are transferable to pursue a bachelor's degree.

GETTING STARTED

HACC offers students:

- The flexibility to study part- or full-time while meeting other obligations in the workplace; and
- Individualized attention and remedial classes if needed to meet admission requirements.